

§ 76.25–10 Size and arrangement of sprinkler heads and pipe sizes.

(a) *General.* (1) The system shall be so designed and arranged that the overhead is effectively sprayed and that all portions of the deck are covered.

(2) One-half inch sprinkler heads shall be used. Sprinkler heads shall be so arranged that no portion of the overhead or vertical projection of the deck is more than 7 feet from a sprinkler head.

(b) *Pipe sizes.* (1) The sizes of branch lines, single cross mains, feed mains, and risers shall be in proportion to the number of sprinkler heads served. The minimum pipe sizes shall be as given in table 76.25–10(b)(1).

TABLE 76.25–10(B)(1)

Minimum nominal pipe size, inches	Maximum number of heads served	
	Vessels whose construction is more combustible than that set forth in §§ 72.05–5 through 72.05–60	Vessels constructed in general agreement with §§ 72.05–5 through 72.05–60
1	2	2
1¼	3	3
1½	5	5
2	10	10
2½	20	40
3	40	250
3½	65
4	100
5	160
6	250

(2) If a complete loop cross main is employed, the size of such cross main shall be in proportion to the number of sprinkler heads served. The minimum pipe sizes shall be as given in table 76.25–10(b)(2). The entire loop shall be of the same size pipe.

TABLE 76.25–10(B)(2)

Minimum nominal pipe size, inches	Maximum number of heads served	
	Vessels whose construction is more combustible than that set forth in §§ 72.05–5 through 72.05–60	Vessels constructed in general agreement with §§ 72.05–5 through 72.05–60
1	5	5

TABLE 76.25–10(B)(2)—Continued

Minimum nominal pipe size, inches	Maximum number of heads served	
	Vessels whose construction is more combustible than that set forth in §§ 72.05–5 through 72.05–60	Vessels constructed in general agreement with §§ 72.05–5 through 72.05–60
1¼	9	9
1½	13	13
2	22	30
2½	40	80
3	80	250
3½	130
4	250

§ 76.25–15 Pumps and water supply.

(a) An automatically controlled pump shall be provided to supply the sprinkling system and shall be used for no other purpose. The size and capacity of the pump shall be governed by the zone having the greatest capacity need for any one deck, and shall be suitable to operate at least the number of heads noted in table 76.25–15(a) with a Pitot tube pressure of at least 15 p.s.i. at all heads (approximately 20 GPM per head). There shall also be sufficient pumping capacity available, either from the automatic pump, the fire pumps, or other source, so that in conjunction with the automatic pump the total number of heads noted in table 76.25–15(a) may be operated with the same efficiency as noted above, and at the same time to deliver water from the two highest fire hose outlets in a manner similar to that described in § 76.10–5(c). Intermediate values may be obtained by interpolation.

TABLE 76.25–15(A)

Maximum number of heads on one deck in one zone	Number of heads automatic pump to supply	Number of heads additional pumps to supply
5	5
10	10
20	10	10
30	12	16
40	15	18
50	15	25
60	20	25
80	20	30
100	20	40
120	20	50
150	20	60
200	20	75